Searching for Novelties in the French Translation of the Suiones

Bernhard Bierschenk[1]
Inger Bierschenk

2016   No. 128

Copenhagen University
Denmark

KOGNITIONSVETENSKAPLIG FORSKNING

Cognitive Science Research

Lund University
Sweden

Searching for Novelties in the
French Translation of the Suiones

Bernhard Bierschenk[1]
Inger Bierschenk

2016   No. 128

Cognitive Science Research
Lund University
University of Copenhagen

Searching for Novelties in the
French Translation of the Suiones

Bernhard Bierschenk[1]
Inger Bierschenk

Abstract   Since the reception of Tacitus in Europe, *Germania* was seen as a useful text for the interpretation of political events. Many of the translators assumed a secret code and thought to find it for an autonomous study of politics. The promotion of translations had contributed to looking at Tacitus from the outside. For overcoming this impediment, the present study is outlining the Agent-action-Objective strategy, which makes possible to look at text from the inside. Thereby, it has become possible to measure personal angles on a topic and also to represent the topic geometrically. Consequently, in dismantling the myth of the birth of nations and the medieval origins of Europe, the present study provides mechanisms for the observation of intentional properties, which point towards structures that are, with respect to the original Latin text, distinct and differently contextualized. Six modern translations into the (1) Swedish, (2) Danish, (3) English, (4) German, (5) French and (6) Italian languages have been made the foundation for the establishment of potential energy surfaces (PES) as well as free energy surfaces (FES). For the French translation, the global state attractor of intention has settled on *Changeability* while the corresponding attractor of orientation has settled on *Vigilance*.

At the time of the *Limes* construction from roughly 83 to 260 AD, Tacitus (about 55 to 120) appeared as an important Roman historian, who wrote on the Suiones as the people of the Scandinavian peninsula. This work is an ethnographic study as well as a synthesis concerning the *non-civilized* people beyond the Limes. As a witness with an unusual inclination to put intentions in the centre of his writing on private, public and collective issues, Tacitus has also been viewed by some to be an extraordinary psychologist.

Compared to the works on *Tacitism*, there has been a lack on evaluative accounts on the part of the translation literature. Most accounts are of a descriptive nature. The political implications of Tacitism were analysed without due considerations of the characteristic differences of the translation. When translations in depth have been reviewed, attention has been given to exactitude, quality and stylistic value as well as to the relation to the edition used for translation but did not mention the historical causes and consequences of these particular traits (Martínez, 2010).

Much of the perspective variation in a text concerns the identification of a feasible solution to its translation into a particular language. The present translation study deals exclusively with the evolution of a French attitude. Resulting novelties may be contrasted with the novelties of the other published translations (B. Bierschenk, 2015a, b; Bierschenk, B., & Bierschenk, I., 2016a, b). Since the relationship between the original text and its translation is generating the boundaries of the information structures to emerge, individual experience can to a certain degree be integrated into the evolving structures. It follows that conceptual changes must be structural in nature, which means that an established landscape is encompassing the identification of those structural relations that remain over change. But the

[1] Contact: Bernhard Bierschenk, Department of Psychology, Lund University, Box 213, SE-221 00 Lund, Sweden; information: https://archive.org/details/studiesinconsciousness

boundaries of a landscape cannot be stretched infinitely. The transformation of an *idea* during translation is a matter of preserving structural invariance.

Originally, the term *Limes* refers to a line that is crossing a road beyond which it was dangerous to move forward. For example, the Limes Germanicus did divide the Roman Empire from the unsubdued Germanic tribes. In this respect it was conceived of as a firm and sacred border. To cross the Limes was the mark of a savage. Further, to transgress it implied to pass the boundaries of rationality and thus civilization. Moreover, to disrespect the Limes would mean to pass the final constraints of character and to commit oneself to perdition. In this sense, to stay within the Limes meant to stay within mental barriers. These *'mental limes'*, running from the north-west of Germany to the south-east, had their greatest extent around the first and second century AD. The second Limes of the Roman Empire relates to the *Hadrian Wall* which divided the northern part of Britain, and is illustrating another defence line against the savages of the north.

Now, the question to be modelled is whether and to what extent the *'Limes Germanicus'* had an influence on the process of cultivation and civilization as well as on mental development. In particular the question to be studied and discussed is whether any mental differences can be shown between France, which is within the Limes, and Germany, which is outside it, as well as England within the Hadrian Wall. No doubt there is a French spirit which appears quite distinct from that found in Germany (B. Bierschenk &, I. Bierschenk, 2016b). Even if it is a farfetched idea, it may well be that Anglo-Saxon England had developed an English spirit that is separated from the Gaul of the French territory which had merged with the Franks (B. Bierschenk &, I. Bierschenk, 2016b). The mythology, attacked by Nicolas Fréret (1714) in lectures on the origin of the Franks, was directed against the idea that the Franks as free man had immigrated from Greece or Troy (Durant, 1965, p. 21). Instead Fréret argued that the Franks historically are known as Germanic tribes that came from the lower and middle Rhine area. They merged with the Gallo-Roman population and contributed with their name to modern France.

Thus, it may well appear that the Gallo-Roman civilization of early times has formed prevailing effects. As a result, distinct intellectual characteristics may have emerged in France as well as in Germany and England. If this is a fact, it may indeed have influenced the relation between previous knowledge of the French translator and his production of textual relations. The same kind of long range effects have been hypothesised for the result of the German and the English translators. The translations have been shown to provide the source for the establishment of genuine perspectivation.

To begin with the translation into the French language, a realistic test has been carried out. With the purpose to discover whether a particular translation would imply a difference in the way in which the regions of a landscape become manifest and whether regional differences would lead to the materialisation of marked differences in the final or global state attractors, their relational coordination has been made visible through the landscapes of information synthesis.

Translation

For the purpose of measuring possible cultivation and civilization effects it is expected that a particular translation contributes with area specific knowledge. Here, the notion knowledge is used to designate the process that comes about through the cooperation of the cultural with the mental dimension. However, this process requires a study of the interplay between the mental dimension and language production. Hence, to discover the corresponding point of reference is only possible if a standpoint is approachable through a textual expression. Thus, to conceive of text as performance means that the underlying steering mechanism is not conscious, but is discoverable. This means in linguistic terms that the

cultural dimension is conveyed by the lexicon, whereas the mental dimension is carried over by syntax (I. Bierschenk, 1989, 2011).

Further, the ability to translate information in a meaningful way implies the assumption of knowledge transfer. But the necessary basic condition for conversion is the assumption of translation. This ability to read and re-write implies that the meaning of a word becomes attuned, which means that it will change as it is used and re-used meanwhile a text grows. It follows that any *text building behaviour* must centre on a systemic arrangement of words into textual wholes. In this sense, words acquire new meanings, which nonetheless are distinct.

Through previously performed studies of text building, it has been shown that it is possible to specify exactly various forms of text building (I. Bierschenk & B. Bierschenk, 2011). On the basis of a scalar component in the form of radians, coordinative relations have been captured and used in the unique specification of self-reference. The corresponding rotations specify exactly the coordinative relation between the parts of a text, regardless of the parts themselves and the medium (the language) over which the interaction between the parts take place.

The producer of a textual expression is characterising his past experiences through his particular style of writing and his exceptional ability of synthesising information. Therefore, perspective and the structure of a complete text must be built up during text production and within the context of a continuously developing language space of unknown dimensionality. Thus, it is the single translator, who is producing the actual textual materials.

Synthesis

Since it is possible to demonstrate dynamical text building behaviour through the discovered [AaO] mechanism (B. Bierschenk, 2011), it provides, concerning intention and orientation, the basis for a thermodynamic description of what is implied by a translation. As a result, this condition has made it possible to identify the dynamic movement patterns of the texture of a text. This means that the basic focus will be on textual pattern dynamics for which the AaO-axiom provides the proper foundation. Conceived in their pattern dynamics, the AaO-units carry intentional cues and contain information about the produced orientation. In particular, the AaO-systems are structurally embedding the translator's point of observation as well as his points of view.

Thus, synthesis proceeds according to the way in which the translator is coupling the components. Different and language-specific functional requirements define neighbourhood and guide the coupling of single textual elements. But the flow dynamics in a developed language space will change in subtle ways, which implies that differences in displaced textual elements can have profound effects on speed and acceleration in their potential energy space. This fact has made it evident that a synthesising process must be conceived of as the outcome of biological coordination. Every single component within an AaO-unit is following its own autonomous rhythm. By handling this individuality, the system has been made capable of establishing two autonomous clocks, namely an A-clock governing the A-component and an O-clock governing the O-component.

A conclusion to be drawn from the clocking mode of the [AaO] mechanism is that the rotation of strings of graphemes is driving rhythmically operating work cycles in the direction toward the sharpest increase in acceleration. Thereby the displacements of grapheme strings can be updated and the change in angular articulation can be calculated without intervening disruptions. Through the clocking mode of the mechanism, it is possible to denote corresponding increases, which finally carry structural significance.

Furthermore, in binding intentional dynamics to the produced textual flows, it is expected that the clocking is manifesting effective operations in the establishment of

corresponding potential energy landscapes. However, the conceptually significant aspects will be captured through free energy landscapes. Its kinematic states are abstractly communicated through naming processes. Naming is expected to provide a sound theoretical basis for synthesis. Hence, what the synthesized novelties may express will be established and made visible through the naming of the convolutions in the obtained energy landscapes.

Flow Dynamics
The text to be analysed is the French translation of Tacitus' description of the Suiones. The text is worded as follows:

> Ensuite, les cités des Suiones, dans l'Océan même, outre leurs guerriers et leurs armes, sont fortes par leurs flottes. La forme de leurs navires se distingue en ceci qu'aux deux extrémités une proue offre un avant toujours prêt pour aborder. Ils ne manœuvrent pas à la voile et ne fixent pas les rames en rangée sur les bords ; l'appareil en est libre, comme sur certains fleuves, et susceptible d'être tourné, selon les circonstances, d'un côté ou de l'autre. Chez eux, la richesse, elle aussi reçoit des honneurs ; c'est pourquoi un seul exerce le pouvoir, sans limitations cette fois et avec un droit absolu à l'obéissance. Et les armes ne sont pas, comme chez les autres Germains, à la disposition de tous, mais enfermées sous bonne garde, voire sous la garde, d'un esclave, car l'Océan éloigne les surprises d'une incursion ennemie et une troupe oisive d'hommes armés tombe aisément dans la licence : c'est un fait que l'exclusion des nobles, des hommes libres, des affranchis même, quand il s'agit de surveiller des armes, répond à l'intérêt d'un roi. (Perret (1949/1962)

Of great significance in the Perspective Text Analysis with the version Vertex (I. Bierschenk & B. Bierschenk, 2004) is the identification of verbs, since the function of a verb is to separate the Agent-field from the Objective-field of a sentence or clause. The definition of verb is fairly wide. As verbs count finite and infinite forms and participles (belonging to the forms of the verb but used with noun and adjective inflexion). Therefore, the concept of verb intransitivity is of no use in this analysis. The verb definition is important insofar as the verb component of a text is the key to the unity clause, which give rise to the oscillating (A) and (O) components.

A Vertex analysis builds strictly on the A-position before the verb and the O-position after the verb. It has nothing to do with semantic interpretation. The consequence is that an Agent is not the same as subject of a sentence. Linguistic considerations concerning traditional language analysis versus the underlying AaO-model of Vertex can be found in e.g., I. Bierschenk (1999/2003, 2011). Based on the results of Table A1 of the Appendix, the following examples may serve as illustration of this principle. An empty A-position is denoted with $(\varnothing_A)$ and an empty O-position with $(\varnothing_O)$. The verb is underlined. The placeholders (dummies) mark that A- or O-variables are implicit, and thus recoverable.

(1) … , qu'aux deux extrémités une proue <u>offre</u> un avant toujours prêt pour $\varnothing_O$ * $\varnothing_A$ <u>aborder</u> $\varnothing_O$.
(2) … et susceptible d'<u>être</u> $\varnothing_O$ * $\varnothing_A$ <u>tourné</u> $\varnothing_O$, selon les circonstances …

Each component (A and O) is associated with a rotation when it rhythmically oscillates in a forward move. To obtain the rotation value in the form of radians, some calculation principles are used depending on textual level and type of textual patterns which are governed by messengers. These patterns are nine for each component, whose base value is calculated (W=1/1), where (W) signifies "winding factor" (Winfree, 1980, pp. 14, 244). This rotation results is a virtual property. For the particular pattern (five), filled A- and O-components are carrying the base value (Rad=3.14) (B. Bierschenk, 2011; I. Bierschenk & B. Bierschenk, 2011, Tab. 8, p.12). On the physical level the calculation concerns sequences of strings of graphemes (approx. words), whose magnitude is defined with (W=1/10 of the base value). This value (0.314) is summed up for each word in a component and is added to the base. The

magnitude of the graphemes within words is defined with (W=1/100 of the base value). The graphemes represent the valve property. They are counted and multiplied (0.0314) with the number of graphemes. The result is added to the base as well.

In practice it has proved convenient to start the calculation with the innermost level. For the first Agent of the first example we calculate as follows: *qu'* (0.4082, the sum of 0.0314*3 + 0.314) + *aux* (0.4082) + *deux* (0.4396) + *extrémités* (0.628) + *une* (0.4082) + *proue* (0.471) = (2.7632) + (3.14) = ($\approx$+5.90). The string *qu'* counts as a word of its own and has three graphemes, since the apostrophe denotes an omitted *e*.

Likewise, the verbs are counted at the grapheme and word level, as also the clause marker (,) and the sentence marker (.). In the summation of a component, the verb is added to (O), the clause marker to the following component, and the sentence marker to the preceding component.

Now, let us move on to see the calculation of a dummy. The illustration will be taken from the A-dummy in the second example above. According to the channelling rule of the procedure, the value of the A-dummy is searched for in the preceding clause, that is, the nearest explicit Agent variable, which is (*, et susceptible d'*). The grapheme and word levels are calculated in the same way as above but the base value for this messenger (six) pattern is (3.87). Thus the sum of the Agent is (2.1672 + 3.87) = $\approx$+6.04. The pattern (eight) value of the dummy is (5.5), which shall now be reduced by the root of the material string that shall be channelled, that is, (5.5 - $\sqrt{6.0372}$) = $\approx$+3.04.

As can be observed, the placeholder is marking that its roots are to be found in another clause. The root extraction means that we have recovered the value of the immaterial (shadowed) string. In case there is both an A- and an O-dummy in the same clause, this is initiating pendulum-like movements and an accumulation of roots is taking place, whose sums finally are reduced from the value of the variable. This can be observed for example in the O-dummy after *être*, whose sum is reduced to ($\approx$-5.19) when all calculations have been carried through.

The O-dummy gets its shadowed value from below and collects the sum of both the A- and the O-variables. However, since they in turn may be shadows, this may cause substantial oscillations. If a sentence marker is following the dummy, no value can be retrieved. It will be conceived as a definite border, as in the Example (1) after *aborder*. The value of the dummy is 0 and together with the verb and the sentence marker the rotation is just ($\approx$+0.88). If the verb instead had been followed by a clause marker, which signals a new clause, the O-dummy had been calculated on a different base.

For those readers who are interested in the details of PTA/Vertex procedures, we refer to the French tutorial mentioned in the Appendix. The text managing exercises are based on the same text in all tutorials, so the package is well suited for comparisons over languages.

The Potential Energy Landscape of the Objective

Conceived in the perspective of *Functional Text Geometry* (B. Bierschenk, 2011), achieved rotations make apparent that irreversible processes appear as instabilities at the kinetic level and as stabilities at the kinematic level. In particular, Energy Landscapes (EL), obtained from dynamic and thermodynamic properties, allow a global view on the produced performance. Subsequently, EL includes both Free Energy Surface (FES) as well as Potential Energy Surface (PES), which is, compared to FES, a more fundamental entity, since PES is free from any subjective parameter choice (Wales, 2003, pp. 1-2).

When the analysis and the calculations have been completed, the data shall be entered into a graphing program (here: SigmaPlot, 2008, version 13). The two components are represented in separate graphs. The variables of the components have to be entered in sequential order on the X-axis. This axis shows the stretching that mark the progression of the

variables. The Y-axis denotes drift and the number of time intervals. An interval is delimited by punctuation marks and must include at least one verb. The intervals in the progression can be read out from this axis, which coordinates the direction in time with the flow dynamic process. Speed and acceleration is expressed by the radians on the Z-axis. The latter indicates the magnitudes, measured in Radians, which are governing the development of the graphs.

The presentation starts with the Objective component, shown in Figure 1, which is denoting the flow dynamics in the orientation dimension of the translation.
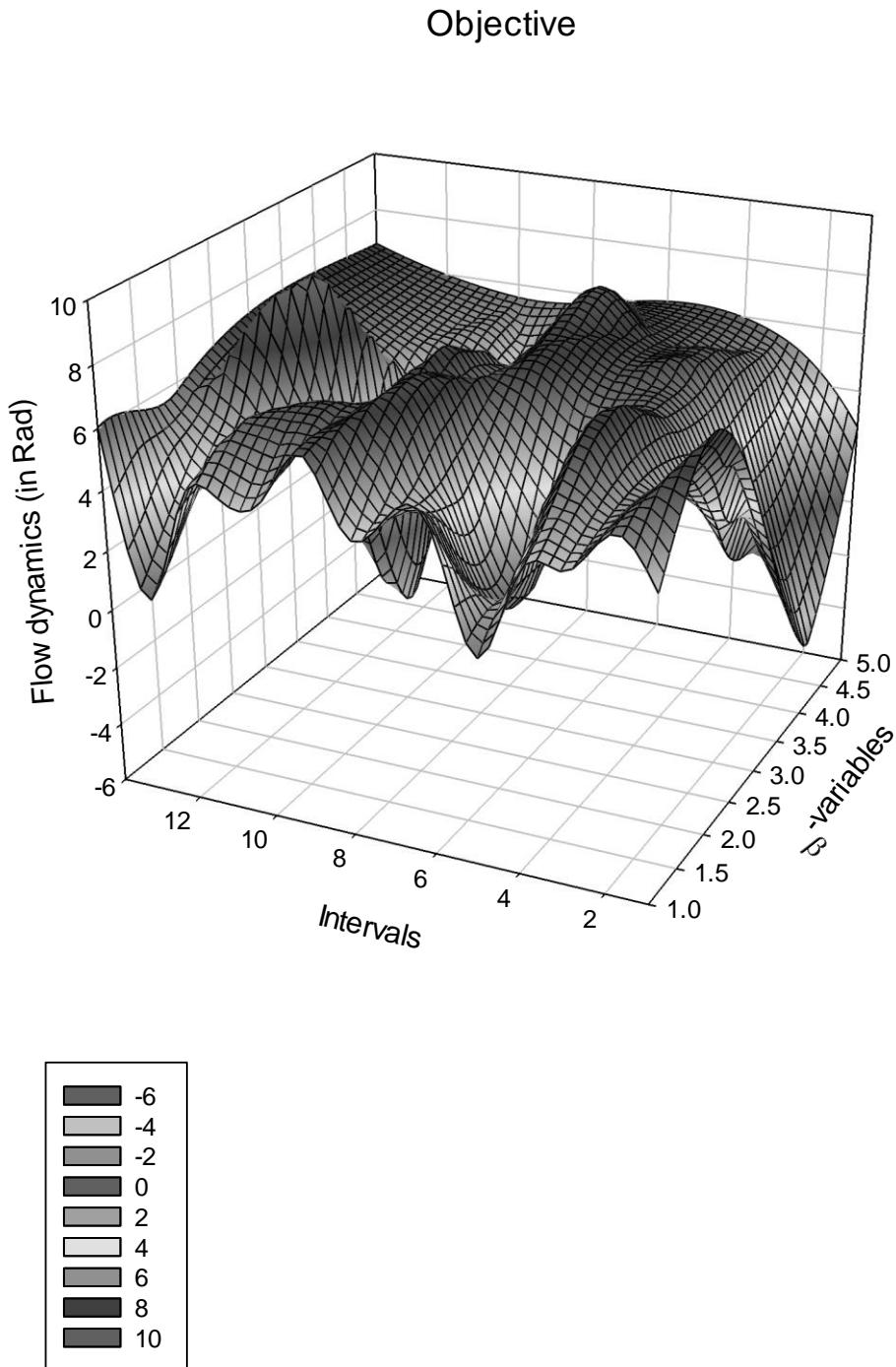

Figure 1   *Flow Dynamics in the Objective-space*

The loading of the data has been done from left to right, as in ordinary reading. This means that the reading of the textual flow dynamics must be done from the right instead. Note that the program has converted the textual intervals into a scale.

The text has fourteen intervals with a varied number of variables, at most five, namely in the 3rd, 7th and 10th interval. This fact and the rotation values of the variables are underlying the shape of the graph. The Objective shape is partly flat, partly smooth in its evolvement and has extensions both over and under the zero-line. Some values are distinctive: Variable four in the 7th interval marks the highest value ($\approx+7.40$). Likewise, the second variable in the 1st interval has a value of ($\approx+7.35$) and the second variable in the 8th interval has the value ($\approx+7.24$). The lowest values of the text are carried by the first variable ($\approx+0.93$) in the 5th interval and by the third variable (≈-2.20) in the 10th interval respectively.

The following analysis will take a closer look on which articulation points in the text gave rise to the formation in question. The second (β_2) variable in the 1st interval consists of two angles: (*sont fortes*) and (*par leurs flottes*). The first angle is specified by the value of $(Case_1)$ ($\approx+4.08$) with the base value (Rad=3.14), which can be compared with the value of the $(Case_2)$, which is relatively high ($\approx+7.35$). It is the higher value that is expressed in the very first wave crest of the graph. The oscillation is due to one of the higher base values (Rad=4.71) and concerns the pattern (seven) referring to a preposition (pointer) of instrumental type. The high rotation in $(Case_4)$ in the 7th interval is likewise articulated in the form of a wave crest ($\approx+7.40$) and has a similar cause, that is, a preposition of the same type (… *avec un droit absolu*). In the 8th interval, variable $(Case_2)$ shows up with the third highest value, namely ($\approx+7.24$), which has come about through (... *, comme chez les autres Germains*). This articulation is manifesting an accumulation of strings, which unquestionably contain a relatively high number of graphemes, although its pattern (six) value is not so high (Rad=3.87) that it provides more than a visible buckle in the flow of the textual space.

Now we are going to observe some articulation points that appear around or under the zero-line. The value that is carried by $(Case_4)$ in the 2nd interval occurs with ($\approx+0.88$), which appears as the light downward tab at the right corner of the graph. The underlying strings refer to the above mentioned O-dummy after the verb (... *aborder* $\varnothing_O$.).

The first variable $(Case_1)$ in the 13th interval with the value ($\approx+0.62$), which can be seen as the leftmost fold, is (... *agit de* $\varnothing_O$). The O-dummy is composed of a number of root extractions of the following clause ($\varnothing_A$ *surveiller des armes*), where the Agent in turn is shadowed, which implies that the material (α) value is reduced. The deepest part of the graph is representing the first O-variable in the 5th interval ($\approx+0.93$). This textual part is (*être* $\varnothing_O$) followed by ($\varnothing_A$ *tourné* $\varnothing_O$, *selon les circonstances*), as earlier mentioned. The root extractions are the same as in the former example but the value is lower, since the O-dummy of the following clause has its root in the long string sequence that follows. The second lowest value (≈-2.20) is carried by the third variable $(Case_3)$ and is to be found in the middle of the 10th interval (... *armés* $\varnothing_O$). As in the previous examples, the value of the O-dummy consists among others of the root of a shadowed value ($\varnothing_A$ *tombe aisément dans la licence)* and an angled string sequence, broken by *dans*. Concerning *real time imaging of the rotation mechanism* see B. Bierschenk (2002).

The Potential Energy Landscape of the Agent

The Agent component (Figure 2 below) gives a picture of the dynamics of the intention in the translation. Characteristic of the Agent is a fairly inertial flow. The reason is that the Agent often repeats itself. In case of several textual objectives in a clause the Agent needs to be the same for all of them. In the present text the result is an Agent graph that looks relatively calm.
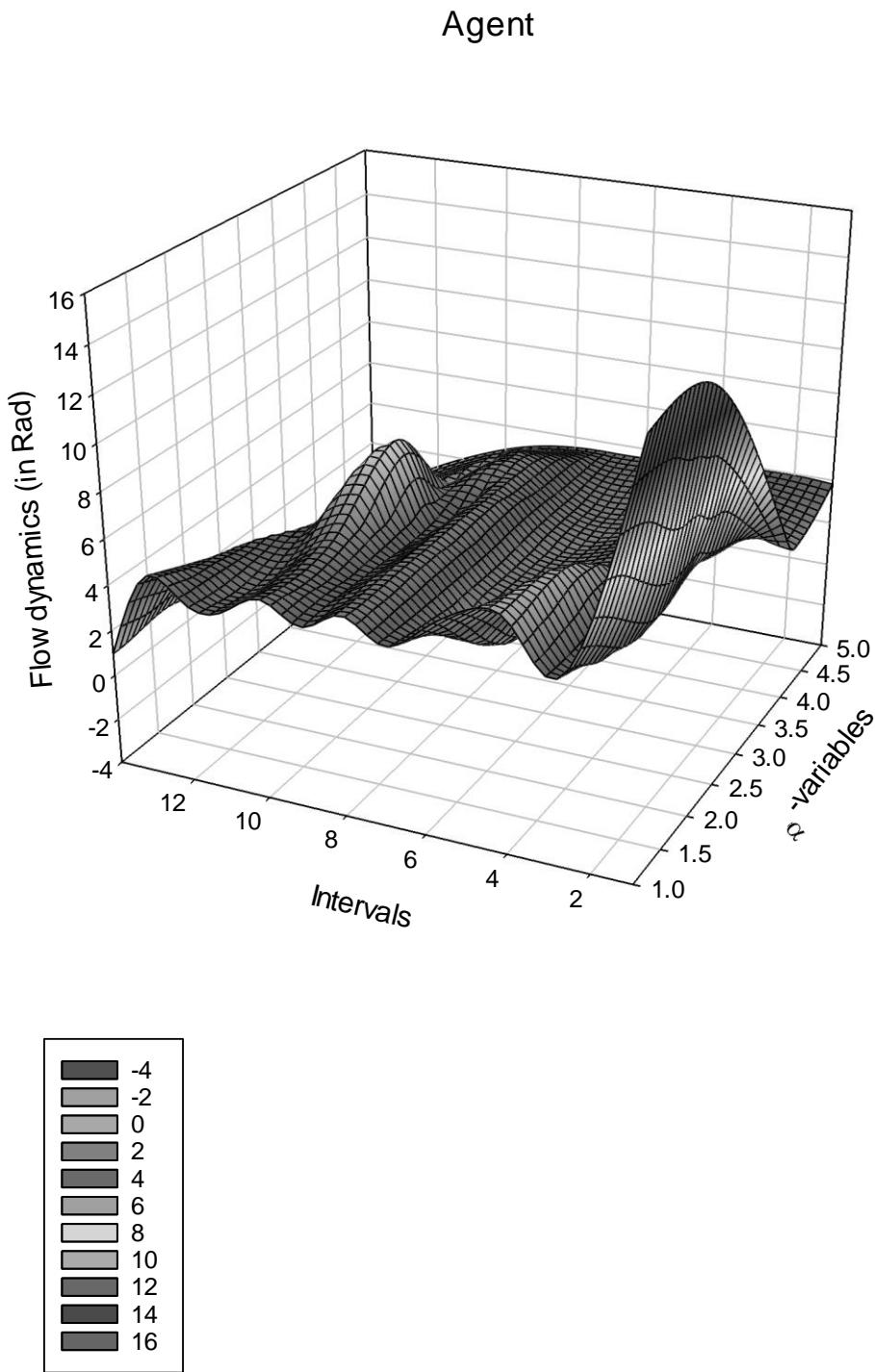
Agent

Figure 2   *Flow Dynamics in the Agent-space*

An exception is the 1st interval, which presents itself by a sharp wave crest. A long explicit sequence of variables is standing for the value ($\approx$+14.13), the highest peak of the flow. This sequence is the very first one, namely (*Ensuite, les cités ... et leurs armes...*). The sequence is not broken until the verb *sont* appears which marks it as a long stack of Agent-strings. Thus, it makes up a formation that may be called a prelude to what follows. A similar formation is to

be found in the original Latin text (I. Bierschenk, 2012). For the rest, a few high values appear, where the first value can be observed in the 2nd interval which is ($\approx$+7.08). The result is as a buckle to the right in the graph.

The other ($\approx$+7.15) can be found in the middle of the 10th interval. It can be observed that this value is contributing with a buckle to the left in the graph. The first articulation point is worded (*La forme de leurs navires se …*) and the second (*et une troupe oisive d'hommes…*). Both imply that the Agent is specified. Moreover, in the final interval it can be noted, that there is a value around the zero-line, namely the place (*,$\varnothing_A$ répond…*). The Agent (*quand il s' …*), is denoting a root that has been extracted twice before manifesting itself into the value ($\approx$+0.98).

Complementary Surface Layouts

The orientation, which is expressed through the Objective component, shows greater variation than does the intention, which is expressed through the Agent component. Both tend to show complementary formations. The difference lies primarily in the higher values of the explicit Objectives, which depend on long string sequences, sometimes phrases that are associatively added to each other. If the Agent is at the same time the kind that is channelled repeated times and also consists of few strings, then the value becomes both less diverse and lower. Such a surface easily gives a flat impression. That the Agent is not manifesting any deep values is due to the high base value of the type of A-dummy. After the extraction of the root values the remaining value may still be fairly high. What causes the depth of the Objective are those places where the O-dummy is followed by a clause marker, that is, not the end of the text. This dummy sometimes has to incorporate copies of both Agent and Objective, which means an increasingly stronger shadowing. The present text contains a more explicit Objective component than its Latin original (I. Bierschenk, 2012). An explanation could be that the translator has tried to be clear and distinct at those articulation points of the text where Tacitus did not speak out.

Free Energy Landscapes

The dynamics of resonating landscape is manifested in continuous and discontinuous trajectories. Both have constraining effects. The latter indicates that evolving helical curves are winding themselves around corresponding components so that a defining thermodynamic path must develop towards its point of destination. Based on the landscape concept, it becomes possible to capture the point of destination through the final or global state attractor. Further, when related to the distance between generated folds, the fusion dynamics gives expression to distinctive mountains and valleys. Moreover, any resulting configuration of state attractors is an expression of completeness.

What kind of structure is evolving during text building is discoverable due to the application of functional text geometry. Thereby, the structure, resulting from the French translation, will now be investigated on the basis of the named state attractors and their relational dependencies. What makes an investigation into the organisation of multiply stable states differing from classical cross-sectional approaches is that the translation is treated as a self-referential and self-organising system, which allows for the study of those states. They depend on changes in the system's parameters and not necessarily on external input. Hence, non-linear dynamical states can organise themselves in unique ways in both space and time. Thus, dynamical systems are responding to stretching, compressing, twisting and bending in natural text production. This condition is producing a difference between the *functional clause* and its textual environment (I. Bierschenk, 1999/2003, 2011). The functional clause as producer of a dynamic cause-effect configuration of non-equilibrium and equilibrium states is maintained by its 'Fließgleichgewicht', approximatively steady states, the rest is textual

environment, which provides the resources for the maintenance of necessary non-symmetry conditions. As a consequence, it can be stated that self-organisation is possible only in a structured environment.

In agreement with the implemented algorithmic operations (I. Bierschenk & B. Bierschenk, 2011, 2013) it is expected that a geometric approach for discovering abstract space relations will produce detailed kinematic information on the working of the A- and O-functions. But it will also be shown that the structurally significant aspects of the produced super-strings can be captured conceptually only in the sequential naming of the attractors of a corresponding landscape. The process of naming has been shown to provide a sound theoretical basis for the communication of stability and order in the emerging 'mental' profiles. Hence, what a particular translator exactly has been able to pick up will be established and made visible, partly through the information carried by the contours of the obtained energy landscapes, and partly through the naming of their regions.

The Orientation Landscape

The Orientation graph of Figure 3 is the result of the dynamics in the folding of the composites of the Objective component. Further, the aim with its graph is to embed its local and global state attractors.
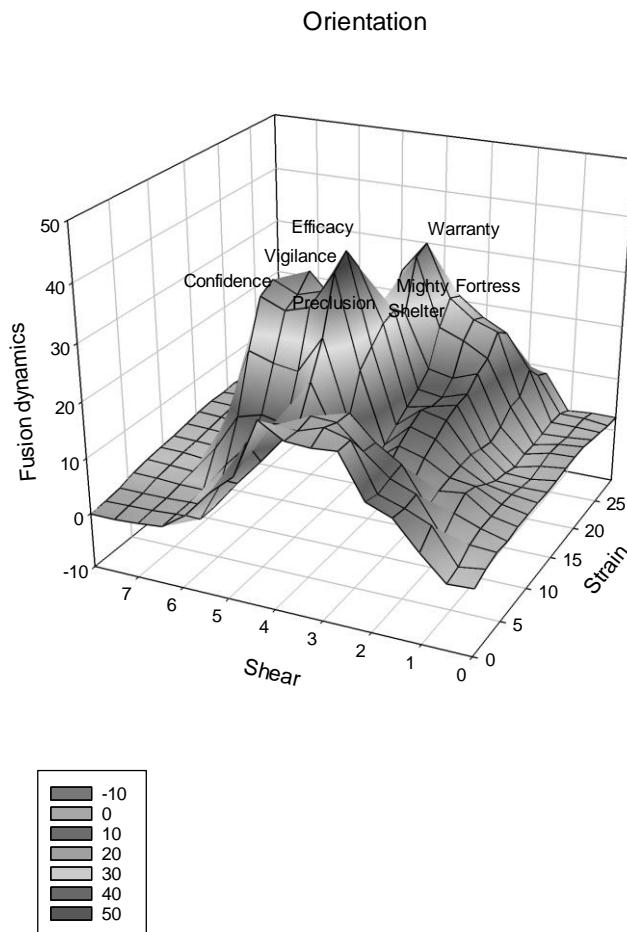
Figure 3 *The Landscape of the Orientation-space*

In a first step, a landscape may be characterised from a surveyor's perspective. Having only access to measures of distance, the surveyor may well be interested in specifying the heights of the mountains. In this way he would be able to define explicitly each of various topological measures. Hence, using local as well as global singularities as distinct markers becomes easily accessible. In this way unique points of reference may be identified and used in the continued discussion. To give a name to a mountain top means giving a handle for a meaningful communication of the achieved states of attraction.

Efficacy appears as the highest point in the landscape and is marked in the position (strain-3, shear-4) which conveys a fusion value of ($q\approx207$). This attractor acts and stands for the determination of fitness.

Vigilance appears in the balance of the invested energy as the name of the global or final state. It is the result of an attraction, positioned at (strain-2, shear-3) which conveys a fusion value of ($q\approx205$). *Vigilance* may have an impact on sustained attention and on certain behavioural response patterns. In particular, this state is required in the event anticipated disloyalty or deceit. Generated by different parties in a society, exerted tension potentials may be disruptive to the balance of a system and affect repulsion in order to restore its fitness condition.

Confidence appears in the position at (strain-12, shear-5) which conveys a fusion value of ($q\approx189$). This is an important state attractor. In balancing tension the attractor appears to refer to the way in which serious risk behaviour is restricted and comes under substantial control. It marks also the saddle on the climbing path where this state becomes transformed towards an ability to succeed.

Preclusion in the position (strain-14, shear-5) conveys a fusion value of ($q\approx185$) which is critical for managing tensions. This state is of particular interest in relation to sections of aggressive people. Stratifying is the way in which serious risk behaviour can be controlled and power can be exercised by justifying defence obligations. Thus, the ability to prevent violation is a key determination.

Warranty in the position (strain-10, shear-5) conveys a fusion value of ($q\approx201$). It means a guarantee or promise which provides the assurance that specific facts or conditions hold true. This factual guarantee may be enforced regardless of civil relationship. This relationship is partly addressing the state of being faithful, partly denoting success in the implementation of law. Hence, *Warranty* provides for protection and reflects the need for necessary restraints. Thereby, the right to generate restraints extents to measures of defence which need to be activated in agreement with anticipated violence from in- or outside.

Mighty Fortress appears in the position (strain-16, shear-5) and conveys a fusion value of ($q\approx180$). This state implies that violence is foreseen, and requires protection against incidences of intensive behaviour and consequently short-term causations of aggressiveness.

Shelter in the position (strain-20, shear-5) finally conveys a fusion value of ($q\approx166$). Since this state marks an ability to influence well-being, its aim is to promote and improve safety resources. The primary core therefore is to promote and maintain the wealth of the people. Hence, to claim legitimacy means attracting and holding the attention of people concerning their wealth and apprehension of upcoming dangers.

The Intention Landscape

The extraction of the descriptors for the invariants of the Intention space will begin with making an important demarcation: A distinction is made between a point of observation and the corresponding points of view. This peculiarity is effectively contributing to a refinement of the characteristic quality of the configuration in the Intention space. A structural expression of a view-point is representing a specific orientation, while a point of observation is representing a certain intention.

Through the expression of a particular motif-structure, in the Intention space the dependency between intention and orientation makes full use of the translators' articulation. The cyclic extraction and naming of the singularities in the Intention space starts at the moment when the process of extraction is advancing through the terminal states of Figure 4.
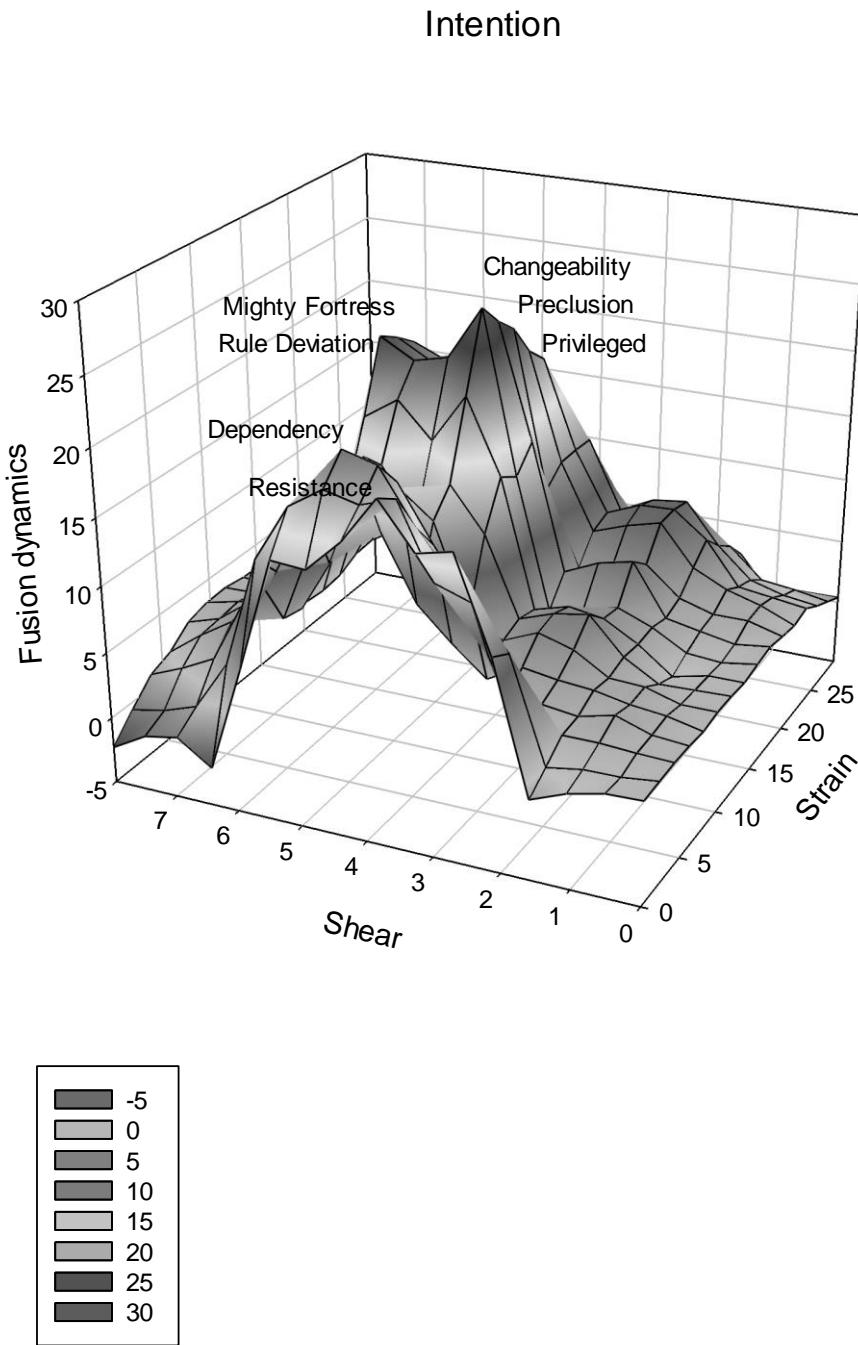
Figure 4   *The Landscape of the Intention space*

A cyclic extraction of the descriptors out of the Orientation-space reflects the coupling of the pathway in both the (O) and (A) concentration spaces. Further, it will be demonstrated to what extent swinging through the domains of the Intention space has caused a significant redistribution of the translator's communication potential.

Changeability in the position (strain-2, shear-4) conveys a fusion value of (q≈196). In contrast to the Orientation space, this is not only the highest but also the descriptor of the global or final attractor in the Intention space. When the pendulum has reached its highest point in the Intention space, the resulting curve is encountering an expression of a state that guarantees positive executive functioning and refers to a significant readiness for action.

Preclusion appears nearby, however at a somewhat lower level. It is encountered in the position (strain-5, shear-5) and conveys a fusion value of (q≈168). It implies a particular charge attached to the individual. This state uniquely determines the involved intentional strength. As a motif, it involves a commitment to do one's best and implies a principled focus on the restriction of acuteness. Whatever the intention may be, this state renders an upright and internally coherent preparedness to establish power controls. Since the possession of power can only be the result of deference by others, it is a resource holding potential and consequently an emergent attraction.

The *Privileged* come into view in the position (strain-13, shear-5) which carries a fusion value of (q≈135). Obviously, to secure people's physical premises, hostile intentions of attacking persons need to be anticipated. This attractor state has obvious influences on the handling of possible hostile intentions. To block disturbing attacks or riots requires the implementation of a plan for limiting individual freedom. If there is some confirmation of disturbance, readiness is the answer to the conflicting behaviour of certain groups.

Mighty Fortress is manifested in the state attractor at the position (strain-15, shear-5) which carries a fusion value of (q≈133). Its presence at the left-hand side implies a means to avoid future problems through uncontrolled behaviour. Primarily, the *Mighty Fortress* involves selectivity concerning temperament and the judgement of the consequences of the behaviour of the unbridled. As state attractor it ensures expanding operations, which are so strong that challengers are forcefully affronted. Understanding this terminus as a restraint is likely to free people from recurring frustrations. This state determines how power can be exercised over others who may be greedy and antagonistic otherwise. To induce hostility is a mythological preoccupation of groups with destruction purposes. Since induction is a technique that is superior to power assertion and exercise of physical control, it implies a more advanced notion of successful domination than to remain within the framework of obedience and punishment.

Rule Deviation in the position (strain-17, shear-5) carries, as an intentional expression, a fusion value of (q≈125) which means that the unbridled is able to explore his action potential and also to reinforce his action capacity. The relationship to the extracted unpredictability is reflected in the capacity to override legal limits. Fitting this state to a potential may imply that prevailing barriers are breaking down.

Dependency in the position (strain-19, shear-5) carries a fusion value of (q≈122) and involves subordination. This state is in itself not an individual quality but the product of a relationship. As a motif it involves a commitment to do one's best and implies a focus on the avoidance of aggression. To conceive a sudden attack implies an intentional affront on existing order. Whatever the intention may be, reliance renders a principled and internally coherent outlook. This terminus refers to a prospective balancing of *Resistance*.

Resistance in the position (strain-23, shear-6) carries a fusion value of (q≈110) suggests charging with force. It finally signifies confidence but does not necessarily imply suspicion. This intentional state refers to every-day like situations, where sometimes reliance is put into question. Hence, within the intentional frame, management of resistance refers to a general sense of unease towards someone or something. Therefore, confrontation measures are effective in preventing mischief. This state provides the saddle to the lowest states.

Discussion

The observed close re-enactment of structural relations allows for a discovery of the unique orientation of a particular structure. That it may be difficult to arrive at the same formation in the orientation as well as in the intention space is a result of the perspective contained in the flow of the French text. Since the evolution of a developing text has to be conceived as a bio-kinematic system, it demands a focus on emerging motifs and themes. The established growth curves have been made dependent on the comprehension of achieved transformations on the trajectories of both Intention and Orientation. The corresponding fitness landscapes are resulting from uniqueness in the process of comprehending differential growth profiles. With reference to the fitness landscape of Intention, it can be concluded that the right-left searching for motifs is reflecting the potential of firm action strategies. When this approach path has transited through the state of being sensitive to potential threats, a transformation is taking place, which provides the context for the comprehension of *Changeability*.

Thus structural stability, appropriate spatial and regional accommodation, and attractive appearance of objectives are the carrying components. Their capacity to reflect changeability according to intention and environmental demands requires a radical perspectivation of survival conditions. At the spatial level, selective movements generate and guarantee properties that are critical for multiple functionality and stability in growth.

The degree of sensitivity of the translator has resulted in *Efficacy*, which is a perspective shift that is reflected in the way in which the landscapes are convoluted in order to express *Changeability*. By concentrating attention on these shifts, the critical structural relation appears as confidence in the operation capacity of the Suiones. Especially the novel emergence of the terminus *Vigilance* is properly illustrated with the careful design of a *Mighty Fortress*. Thereby, the Suiones do not control any final behaviour, but the induction of behaviour.

References

Bierschenk, B. (2002). Real time imaging of the rotation mechanism producing interview-based language spaces. *Cognitive Science Research,* 83. Copenhagen University, Denmark & Lund University, Sweden.

Bierschenk, B. (2011). Functional text geometry: The essentials of Perspective Text Analysis. *Cognitive Science Research*, 101. Copenhagen University, Denmark & Lund University, Sweden.

Bierschenk, B. (2012) (Ed.). Consciousness in historical time: Tacitus on the Suiones. *Cognitive Science Research*, 103. Copenhagen University, Denmark & Lund University, Sweden.

Bierschenk, B. (2015a). Swedish Receptiveness: The Suiones of Tacitus *Cognitive Science Research*, 121. Copenhagen University, Denmark & Lund University, Sweden.

Bierschenk, B. (2015b). Danishness in the translation of the Suiones. *Cognitive Science Research*, 122. Copenhagen University, Denmark & Lund University, Sweden.

Bierschenk, B., & Bierschenk, I. (2016a). Mirroring English Values in the translation of the Suiones. *Cognitive Science Research*, 123. Copenhagen University, Denmark & Lund University, Sweden.

Bierschenk, B., & Bierschenk, I. (2016b). Disclosing the German perspectivation on the Suiones. *Cognitive Science Research*, 124. Copenhagen University, Denmark & Lund University, Sweden.

Bierschenk, I. (1989). Language as carrier of consciousness. *Cognitive Science Research*, 30. Copenhagen University, Denmark & Lund University, Sweden.

Bierschenk, I. (1999/2003). The essence of text. A dialogue on Perspective Text Analysis. *Cognitive Science Research,* 70. Copenhagen University, Denmark & Lund University, Sweden.

Bierschenk, I. (2011). Ett ekologiskt perspektiv på språk och textanalys. [An ecological perspective on language and text analysis]. *Cognitive Science Research*, 98. Copenhagen University, Denmark & Lund University, Sweden.

Bierschenk, I. (2012). Flow dynamics in ancient Latin. In: B. Bierschenk (Ed.), Consciousness in historical time: Tacitus on the Suiones (pp. 5-10). *Cognitive Science Research*, 103. Copenhagen University, Denmark & Lund University, Sweden.

Bierschenk, I., & Bierschenk, B. (2004). Diagnose der Leistungsheterogenität durch die Perspektivische Textanalyse: VERTEX (Diagnosing heterogeneity in achievement by means of Perspective Text Analysis: VERTEX). In: W. Bos, E.-M. Lankes, N. Plaßmeier, & K. Schwippert (Eds.), *Heterogeneity: Eine Herausforderung an die Bildungsforschung (Heterogeneity: A Challenge to Educational Research* (pp.16-28). Münster: Waxmann.

Bierschenk, I., & Bierschenk, B. (2011). Perspective Text Analysis: Tutorial to Vertex. *Cognitive Science Research*, 100. Copenhagen University, Denmark & Lund University, Sweden.

Durant, W., & Durant, A. (1965). *Kulturgeschichte der Menschheit: Das Zeitalter Voltaires (The story of civilization: The Age of Voltaire), Vol. 15* (I), p. 21. Editions: Rencontre, Lausanne and R. Veihl, Genéve. (Translation into German by Elinor Lipper)

Martínez, B., S. (2010). *Translating Tacitus: the reception of Tacitus's works in the vernacular languages of Europe, 16th – 17th centuries.* Pisa: Plus-Pisa University Press.

Perret, J. (1949/1962). *Tacite. La Germanie*. Paris: Société d'Édition les Belles Lettres.

SigmaPlot (2008). *Exact graphs for exact science. User's manual* (Version 13). Chicago: SPSS Inc.

Wales, D. J. (2003). *Energy landscapes: Applications to clusters, biomolecules and glasses.* Cambridge: Cambridge University Press.

Winfree, A. T. (1980). *The geometry of biological time*. Berlin: Springer Verlag.

Appendix

Manuals

Bierschenk, I., & Bierschenk, B. (2011). Perspective Text Analysis: Tutorial to Vertex. *Cognitive Science Research*, 100. Copenhagen University & Lund University.

Bierschenk, I., & Bierschenk, B. (2013a). Perspektivisk Textanalys (PTA). Handledning till Vertex. *Cognitive Science Research*, 106. Copenhagen University & Lund University.

Bierschenk, I., & Bierschenk, B. (2013b). Perspektivisk Textanalys (PTA). Manual till Vertex med danskt material. *Cognitive Science Research*, 107. Copenhagen University & Lund University.

Bierschenk, I., & Bierschenk, B. (2013c). La géométrie du texte. Manuel sur le système PTA/Vertex. *Cognitive Science Research*, 110. Copenhagen University & Lund University.

Bierschenk, I., & Bierschenk, B. (2014a). Perspektivische Textanalyse: Anweisungen für Vertex. *Cognitive Science Research*, 114. Copenhagen University & Lund University.

Bierschenk, I., & Bierschenk, B. (2014b). Analisi geometrica di testo. Manuale per il PTA /Vertex. *Cognitive Science Research*, 113. Copenhagen University & Lund University.

Tables

Table A1
AaO Coding and Computation of Radians

Code	String	Count	Calculation	Base	Sum
0	[.]				
0,1	*				
30	Ensuite	7	0.6579		
0,1	,	1	0.4257		
	les	3	0.5031		
	cites	5	0.5805		
	des	3	0.5031		
	Suiones	7	0.6579		
	,	1	0.4257		
60	dans	4	0.5418		
	l'	2	0.4644		
	Ocean	5	0.5805		
	meme	4	0.5418		
0,1	,	1	0.4257		
	outre	5	0.5805		
	leurs	5	0.5805		
	guerriers	9	0.7353		
0,1	et	2	0.4644		
	leurs	5	0.5805		
	armes	5	0.5805		
0,1	,	1	0.4257		
			10.256	3.87	14.1255
40	sont	4	0.4396		
50	fortes	6	0.5024		
			0.942	3.14	4.082
70	par	3	0.6123		
70	leurs	5	0.7065		
70	flottes	7	0.8007		
0	.	1	0.5181		
			2.6376	4.71	7.3476

0,1	*				
30	La	2	0.4644		
	forme	5	0.5805		
60	de	2	0.4644		
	leurs	5	0.5805		
	navires	7	0.6579		
	se	2	0.4644		
			3.2121	3.87	7.0821
40	distingue	9	0.7353		
60	en	2	0.4644		
60	ceci	4	0.5418		
			1.7415	3.87	5.6115
0,1	qu'	3	0.3068		
60	aux	3	0.3068		
30	deux	4	0.3304		
	extremites	10	0.472		
	une	3	0.3068		
	proue	5	0.354		
			2.0768	2.36	4.4368
40	offre	5	0.471		
	un	2	0.3768		
	avant	5	0.471		
	toujours	8	0.5652		
	pret	4	0.4396		
			2.3236	3.14	5.4636
80	pour	4	0.77		
80	*		6.28		1.6608
0,1	*				
30	*		5.5		3.3936
40	aborder	7	0.5338		
50	*		0		

0	.	1	0.3454		
			0.8792	0	0.8792
0,1	*				
	Ils	3	0.4082		
	ne	2	0.3768		
			0.785	3.14	3.925
40	manoeuvrent	11	0.6594		
	pas	3	0.4082		
			1.0676	3.14	4.2076
60	à	1	0.4257		
	la	2	0.4644		
	voile	5	0.5805		
			1.4706	3.87	5.3406
0,1	et	2	0.3768		
	ne	2	0.3768		
			0.7536	3.14	3.8936
40	fixent	6	0.5024		
	pas	3	0.4082		
	les	3	0.4082		
	rames	5	0.471		
			1.7898	3.14	4.9298
60	en	2	0.4644		
	rangée	6	0.6192		
			1.0836	3.87	4.9536
60	sur	3	0.5031		
	les	3	0.5031		
	bords	5	0.5805		
			1.5867	3.87	5.4567
0,1	;	1	0.4257		

	l'	2	0.4644		
	appareil	8	0.6966		
60	en	2	0.4644		
			2.0511	3.87	5.9211
40	est	3	0.4082		
50	libre	5	0.471		
			0.8792	3.14	4.0192
0,1	,	1	0.4257		
0,1	comme	5	0.5805		
60	sur	3	0.5031		
60	certains	8	0.6966		
60	fleuves	7	0.6579		
			2.8638	3.87	6.7338
0,1	,	1	0.4257		
0,1	et	2	0.4644		
30	susceptible	11	0.8127		
60	d'	2	0.4644		
			2.1672	3.87	6.0372
40	etre	4	0.8792		
50	*		6.28		0.93
			7.1592		
0,1	*				
30	*		5.5		3.0429
40	tourné	6	0.7638		
50	*				
0,1	,	1	0.0864		
60	selon	5	0.1178		
	les	3	0.1021		
	circonstances	13	0.1806		
			1.2505	0.785	2.0355

0,1	,	1	0.4257		
60	d'	2	0.4644		
60	un	2	0.4644		
60	coté	4	0.5418		
			1.8963	3.87	5.7663
0,1	ou	2	0.4644		
60	de	2	0.4644		
	l'	2	0.4644		
	autre	5	0.5805		
0	.	1	0.4257		
			2.3994	3.87	6.2694
0,1	*				
60	Chez	4	0.3304		
60	eux	3	0.3068		
0,1	,	1	0.2596		
	la	2	0.2832		
	richesse	8	0.4248		
0,1	,	1	0.2596		
	elle	4	0.3304		
	aussi	5	0.354		
			2.5488	2.36	4.9088
40	recoit	6	0.5024		
50	des	3	0.4082		
50	honneurs	8	0.5652		
			1.4758	3.14	4.6158
0,1	;	1	0.3454		
	c'	2	0.3768		
			0.7222	3.14	3.8622
40	est	3	0.4082		
50	pouquoi	8	0.5652		
50	un	2	0.3768		

50	seul	4	0.4396		
			1.7898	3.14	4.9298
0,1	*				
30	*		5.5		3.5348
40	exerce	6	0.5024		
50	le	2	0.3768		
50	pouvoir	7	0.5338		
			1.413	3.14	4.553
0,1	,	1	0.3454		
60	sans	4	0.5418		
60	limitations	11	0.8127		
60	cette	5	0.5805		
60	fois	4	0.5418		
			2.8222	3.87	6.6922
0,1	et	2	0.5652		
70	avec	4	0.6594		
	un	2	0.5652		
	droit	5	0.7065		
	absolu	6	0.7536		
			2.6847	4.71	7.3947
60	à	1	0.4257		
	l'	2	0.4644		
	obéissance	10	0.774		
0	.	1	0.4257		
			2.0898	3.87	5.9598
0,1	*				
0,1	Et	2	0.3768		
	les	3	0.4082		
	armes	5	0.471		
	ne	2	0.3768		

			1.6328	3.14	4.7728
40	sont	4	0.4396		
50	pas	3	0.4082		
			0.8478	3.14	3.9878
0,1	,	1	0.4257		
60	comme	5	0.5805		
60	chez	4	0.5418		
60	les	3	0.5031		
60	autres	6	0.6192		
60	Germains	8	0.6966		
			3.3669	3.87	7.2369
0,1	,	1	0.4257		
60	à	1	0.4257		
	la	2	0.4644		
	disposition	11	0.8127		
			2.1285	3.87	5.9985
60	de	2	0.4644		
	tous	4	0.5418		
			1.0062	3.87	4.8762
0,1	,	1	0.3454		
0,1	mais	4	0.4396		
			0.785	3.14	3.925
40	enfermées	9	0.7353		
60	sous	4	0.5418		
	bonne	5	0.5805		
	garde	5	0.5805		
			2.4381	3.87	6.3081
0,1	,	1	0.4257		
60	voire	5	0.5805		

60	sous	4	0.5418		
60	la	2	0.4644		
60	garde	5	0.5805		
			2.5929	3.87	6.4629
0,1	,	1	0.4257		
60	d'	2	0.4644		
	un	2	0.4644		
	esclave	7	0.6579		
			2.0124	3.87	5.8824
0,1	,	1	0.3454		
0,1	car	3	0.4082		
	l'	2	0.3768		
	Ocean	5	0.471		
			1.6014	3.14	4.7414
40	éloigne	7	0.5338		
50	les	3	0.4082		
50	surprises	8	0.5652		
			1.5072	3.14	4.6472
60	d'	2	0.4644		
	une	3	0.5031		
	incursion	8	0.6966		
	ennemie	7	0.6579		
			2.322	3.87	6.192
0,1	et	2	0.4645		
30	une	3	0.5031		
	troupe	6	0.6192		
	oisive	6	0.6192		
60	d'	2	0.4644		
	hommes	6	0.6192		
			3.2896	3.87	7.1596

40	armés	5	0.942		
50	*		6.28		-2.1950
0,1	*				
30	*		5.5		2.8243
40	tombe	5	0.471		
50	aisément	8	0.5652		
			1.0362	3.14	4.1762
60	dans	4	0.5418		
	la	2	0.4644		
	licence	7	0.6579		
			1.6641	3.87	5.5341
0,1	:	1	0.3454		
30	c'	2	0.3768		
			0.7222	3.14	3.8622
40	est	3	0.4082		
50	un	2	0.3768		
	fait	4	0.4396		
50			1.2246	3.14	4.3646
0,1	que	3	0.4082		
50	l'	2	0.3768		
50	exclusion	9	0.5966		
50	des	3	0.4082		
50	nobles	6	0.5024		
			2.2922	3.14	5.4322
0,1	,	1	0.3454		
50	des	3	0.4082		
50	hommes	6	0.5024		
50	libres	6	0.5024		
			1.7584	3.14	4.8984

0,1	,	1	0.3454		
30	des	3	0.4082		
			0.7536	3.14	3.8936
40	affranchis	10	0.628		
50	meme	4	0.4396		
			1.0676	3.14	4.2076
0,1	,	1	0.3454		
30	quand	5	0.471		
30	Il	2	0.3768		
30	s'	2	0.3768		
			1.57	3.14	4.71
40	agit	4	0.5418		
60	de	2	0.4644		
60	*		6.28		0.615
0,1	*				
30	*		5.5		3.3297
40	surveiller	10	0.628		
50	des	3	0.4082		
50	armes	5	0.471		
			1.5072	3.14	4.6472
0,1	,	1	0.605		
30	*		5.5		0.9845
40	répond	6	0.6192		
60	à	1	0.4257		
60	l'	2	0.4644		
60	intéret	7	0.6579		
			2.1672	3.87	6.0372
60	d'	2	0.4644		

60	un	2	0.4644		
60	roi	3	0.5031		
0	.	1	0.4257		
			1.8576	3.87	5.7276

Table A2
Intervals and Radians of alpha and beta variables

Case	Interval	Agent	Objective
1	1	14.1255	4.0820
2	1	14.1255	7.3476
1	2	7.0821	5.6115
2	2	4.4368	5.4635
3	2	3.3936	1.6608
4	2	3.0509	0.8792
1	3	3.9250	4.2076
2	3	3.9250	5.3406
3	3	3.8936	4.9298
4	3	3.8936	4.9536
5	3	3.8936	5.4566
1	4	5.9211	4.0191
2	4	5.9211	6.7338
1	5	6.0372	0.9300
2	5	3.0429	2.0355
3	5	3.0429	5.7663
4	5	3.0429	6.2694
1	6	4.9088	4.6158
1	7	3.8622	4.9298
2	7	3.5347	4.5530
3	7	3.5347	6.6922
4	7	3.5347	7.3947
5	7	3.5347	5.9598
1	8	4.7728	3.9878
2	8	4.7728	7.2369
3	8	4.7728	5.9985
4	8	4.7728	4.8762
1	9	3.9250	6.3081
2	9	3.9250	6.4629
3	9	3.9250	5.8824
1	10	4.7413	4.6472
2	10	4.7413	6.1920
3	10	7.1595	-2.1950
4	10	2.8242	4.1762
5	10	2.8242	5.5340
1	11	3.8622	4.3676
2	11	3.8622	5.4322
3	11	3.8622	4.8983
1	12	3.8936	4.2076
1	13	4.7100	0.6150
2	13	3.3297	4.6472
1	14	0.9845	6.0372
2	14	0.9845	5.7276

Table A3

Transformation of beta variables

X	Y	Node	Value	Transformation	Literal English
0	1	D	0		
1	0	1	4.082	Sont fortes	are strong
1	**1**	**T₁**	**4.082**	**Pouvoir irrésistible**	**Powerfulness**
2	0	3	5.6115	Distingue en ceci	Distinguished in this
3	0	4	5.4636	Offre un avant toujours prêt	Offers a front always ready
3	**1**	**T₂**	**11.0751**	**Digne dans Apparence**	**Dignified in Appearance**
4	0	D	0		
5	0	2	7.3476	Par leurs flottes	By their fleets
5	**1**	**T₃**	**7.3476**	**Modification de la position**	**Alteration of Position**
3	*1*	*T₂*	*11.0751*	*Digne dans Apparence*	*Dignified in Appearance*
5	*1*	*T₃*	*7.3476*	*Modification de la position*	*Alteration of Position*
5	**2**	**T₄**	**18.4227**	**Affection de l'attitude**	**Affection of Attitude**
6	0	7	4.2076	Manoeuvrent pas	not manipulated
7	0	8	5.3406	À la voile	with sails
7	**1**	**T₅**	**9.5482**	**Action vigoureuse**	**Vigorous Action**
5	*1*	*T₄*	*18.4227*	*Affection de l'attitude*	*Affection of Attitude*
7	*1*	*T₅*	*9.5482*	*Action vigoureuse*	*Vigorous Action*
7	**2**	**T₆**	**27.9709**	**Dureté**	**Toughness**
8	0	9	4.9298	*Fixent pas le rames*	Not set the oars
9	0	10	4.9536	*En rangée*	*Row*
9	**1**	**T₇**	**9.8834**	**Réglage flexible**	**Flexible Setting**
7	*2*	*T₆*	*27.9709*	*Dureté*	*Toughness*
9	*1*	*T₇*	*9.8834*	*Réglage flexible*	*Flexible setting*
9	**2**	**T₈**	**37.8543**	**Contrôle**	**Control**
10	0	D	0		
11	0	11	5.4567	Sur les bords	On the edges
11	**1**	**T₉**	**5.4567**	**Avantage**	**Advantage**
9	*1*	*T₈*	*37.8543*	*Contrôle*	*Control*
11	*1*	*T₉*	*5.4567*	*Avantage*	*Advantage*
11	**2**	**T₁₀**	**43.311**	**La supériorité de moyens**	**Superiority of Means**
1	*1*	*T₁*	*4.082*	*Pouvoir irrésistible*	*Powerfulness*
11	*1*	*T₁₀*	*43.311*	*La supériorité de moyens*	*Superiority of Means*
11	**3**	**T₁₁**	**47.393**	**Autonomie**	**Autonomy**
12	0	D	0		
13	0	12	4.0192	Est libre	Is free
13	**1**	**T₁₂**	***11.3971***	**Liberté**	**Liberty**
11	*3*	*T11*	*47.393*	*Autonomie*	*Autonomy*
13	*1*	*T12*	*11.3971*	*Liberté*	*Liberty*
13	**3**	**T₁₃**	**51.4122**	**Autodétermination**	**Self-determination**
14	0	D	0		
15	0	13	6.7338	Comme sur certains fleuves	As on some rivers
15	**1**	**T₁₄**	**6.7338**	Affluents	**Tributaries**
13	*3*	*T₁₃*	*51.4122*	*Autodétermination*	*Self-determination*
15	*1*	*T₁₄*	*6.7338*	*Affluents*	*Tributaries*
15	**3**	**T₁₅**	**58.146**	Mérite	**Merit**
16	0	16	5.7663	D'un coté	On one side
17	0	17	6.2694	Ou de l'autre	Either
17	**1**	**T₁₆**	**12.0357**	Variabilité	**Variability**
15	*3*	*T₁₅*	*58.146*	*Mérite*	*Merit*
17	*1*	*T₁₆*	*12.0357*	*Variabilité*	*Variability*
17	**3**	**T₁₇**	**70.1817**	**Vigilance**	**Vigilance**
18	0	D	0		

19	0	18	4.6158	Recoit des honneurs	Receives honors
19	**1**	**T₁₈**	**4.6158**	**Estime**	**Esteem**
17	*1*	*T₁₇*	*70.1817*	*Vigilance*	*Vigilance*
19	*1*	*T₁₈*	*4.6158*	*Estime*	*Esteem*
19	**3**	**T₁₉**	**74.7975**	**Regard favorable**	**Favourable Regard**
20	0	19	4.9298	Est pourquoi un seul	Why is one
21	0	20	4.553	Exerce le pouvoir	Exercises power
21	**1**	**T₂₀**	**9.4828**	**Honnêteté**	**Honesty**
19	*3*	*T₁₉*	*74.7975*	*Regard favorable*	*Favourable Regard*
21	*1*	*T₂₀*	*9.4828*	*Honnêteté*	*Honesty*
21	**3**	**T₂₁**	**84.2803**	**Conduite fondée sur des principes**	**Principled Conduct**
22	0	21	6.6922	Sans limitations cette fois	This time without limitations
23	0	22	7.3947	Et avec un droit absolu	And with an absolute right
23	**1**	**T₂₂**	**14.0869**	**Privilège**	**Privilege**
21	*3*	*T₂₁*	*84.2803*	*Conduite fondée sur des principes*	*Principled conduct*
23	*1*	*T₂₂*	*14.0869*	*Privilège*	*Privilege*
23	**3**	**T₂₃**	**98.3672**	Maîtrise	**Mastery**
24	0	D	0		
25	0	23	5.9598	À l'obéissance	In obedience
25	**1**	**T₂₄**	**5.9598**	**Acceptation de l'autorité**	**Acceptance of Authority**
23	*3*	*T₂₃*	*98.3672*	*Maîtrise*	*Mastery*
25	*1*	*T₂₄*	*5.9598*	*Acceptation de l'autorité*	*Acceptance of Authority*
25	**3**	**T₂₅**	**104.327**	**Potentiel**	**Potential**
26	0	D	0		
27	0	24	3.9878	Sont pas	Are not
27	**1**	**T₂₆**	**3.9878**	**Négation**	**Negation**
29	1	26	5.9598	À la sans	In no
29	2	27	4.8762	De tous	All
28	**2**	**T₂₇**	**10.8747**	Sélectivité	**Selectivity**
27	*1*	*T₂₆*	*3.9878*	*Négation*	*Negation*
28	*2*	*T₂₇*	*10.8747*	*Sélectivité*	*Selectivity*
27	**2**	**T₂₈**	**14.8625**	**Exigences relatives à induction**	**Requirements for Induction**
25	*3*	*T₂₅*	*104.327*	*Potentiel*	*Potential*
27	*2*	*T₂₈*	*14.8625*	*Exigences relatives à induction*	*Requirements for Induction*
26	**2**	**T₂₉**	**119.1895**	**Charge avec la Force**	**Charging with Force**
29	3	D	0		
29	4	25	7.2369	Comme chez les autres Germains	Like other Germans
28	**4**	**T₃₀**	**7.2369**	**Contrastant**	**Contrasting**
26	*2*	*T₂₉*	*119.1895*	*Charge avec la Force*	*Charging with Force*
29	*4*	*T₃₀*	*7.2369*	*Contrastant*	*Contrasting*
26	**4**	**T₃₁**	**126.426**	**Gestion de la résistance**	**Mgt of Resistance**
27	8	28	6.3081	Enfermées sous bonne garde	Confined under guard
26	8	29	6.4629	Voire sous la garde	Or in the custody
26	**7**	**T₃₂**	**12.771**	**Limitation**	**Limitation**
25	8	D	0		
24	8	30	5.8824	D'un esclave	From a slave
24	**7**	**T₃₃**	**5.8824**	**L'objet contrôlé**	**Controlled Subject**
26	*7*	*T₃₂*	*12.771*	*Limitation*	*Limitation*
24	*7*	*T₃₃*	*5.8824*	*L'objet contrôlé*	*Controlled Subject*
24	**6**	**T₃₄**	**18.6534**	**Dépendance**	**Dependency**
26	*4*	*T₃₁*	*126.426*	*Gestion de la résistance*	*Mgt of Resistance*
24	*6*	*T₃₄*	*18.6534*	*Dépendance*	*Dependency*
24	**5**	**T₃₅**	**145.0797**	**Obéissance**	**Obedience**
23	8	31	4.6472	Éloigne les surprises	Away the surprises
22	8	32	6.192	D'une incursion ennemie	On an enemy incursion
22	**7**	**T₃₆**	**10.8392**	**Prévention des attaques**	**Attack Prevention**
21	8	34	4.1762	Tombe aisément	Easily falls

20	8	35	5.5341	Dans la licence	In the license
20	**7**	**T₃₇**	**9.7103**	**Ecart par rapport à des règlesnormales**	**Deviation from Normal Rules**
22	*7*	*T₃₆*	*10.8392*	*Prévention des attaques*	*Attack prevention*
20	*7*	*T₃₇*	*9.7103*	*Ecart par rapport à des règlesnormales*	*Deviation from normal rules*
20	**6**	**T₃₈**	**20.5495**	**Sécurité**	**Safety**
24	*5*	*T₃₅*	*145.0797*	*Obéissance*	*Obedience*
20	*6*	*T₃₈*	*20.5495*	*Sécurité*	*Safety*
20	**5**	**T₃₉**	**165.6293**	**Abri**	**Shelter**
19	8	36	4.3646	Est un fait	Is a fact
18	8	37	5.4322	Que l'exclusion des nobles	That the exclusion of noble
18	**7**	**T₄₀**	**9.7968**	**Ne pas tenir compte réelle de la noblesse**	**Actual Disregard of Noblemen**
17	8	D	0		
16	8	38	4.8984	Des hommes libres	Free men
16	**7**	**T₄₁**	**4.8984**	**Privilège du citoyen**	**Privilege of Citizen**
18	*7*	*T₄₀*	*9.7968*	*Ne pas tenir compte réelle de la noblesse*	*Actual Disregard of Noblemen*
16	*7*	*T₄₁*	*4.8984*	*Privilège du citoyen*	*Privilege of citizen*
16	**6**	**T₄₂**	**14.6952**	**Efficacité de la lutte**	**Efficacy of Control**
20	*5*	*T₃₉*	*165.6293*	*Lieu de retraite*	*Shelter*
16	*6*	*T₄₂*	*14.6952*	*Efficacité de la lutte*	*Efficacy of Control*
16	**5**	**T₄₃**	**180.3245**	**Puissante forteresse**	**Mighty Fortress**
15	8	D	0		
14	8	39	4.2076	Affranchis meme	Freedmen
14	**7**	**T₄₄**	**4.2076**	**Libéré**	**Liberated**
16	*5*	*T₄₃*	*180.3245*	*Puissante forteresse*	*Mighty Fortress*
14	*7*	*T₄₄*	*4.2076*	*Libéré*	*Liberated*
14	**5**	**T₄₅**	**184.5321**	**Exclusion**	**Preclusion**
13	8	D	**0**		
12	8	41	4.6472	Surveiller des armes	Monitor Arms
12	**7**	**T₄₆**	**4.6472**	**Contrôlez les armes**	**Arms Control**
14	*5*	*T₄₅*	*184.5321*	*Exclusion*	*Preclusion*
12	*7*	*T₄₆*	*4.6472*	*Contrôlez les armes*	*Arms Control*
12	**5**	**T₄₇**	**189.1792**	**Confiance**	**Confidence**
11	8	42	6.0372	Réspond à l'intéret	Respond to the interest
10	8	43	5.7276	D'un roi	On the king
10	**7**	**T₄₈**	**11.7648**	**L'intérêt principal**	**Principal interest**
12	*5*	*T₄₇*	*189.1792*	*Confiance*	*Confidence*
10	*7*	*T₄₈*	*11.7648*	*L'intérêt principal*	*Principal Interest*
10	**5**	**T₄₉**	**200.9441**	**Garantie**	**Warranty**
9	8	D	0		
8	8	5	1.6608	aborder+manoeuvre pas+à la voile	land+no+maneuver+under sail
8	**7**	**T₅₀**	**1.6608**	**Mouvements habiles**	**Skilful Movements**
7	8	D	0		
6	8	15	2.0355	Tourné selon les circonstances	Turned depending on the circumstances
6	**7**	**T₅₁**	**2.0355**	**Changeabilié**	**Changeability**
8	*7*	*T₅₀*	*1.6608*	*Mouvements habiles*	*Skilful Movements*
6	*7*	*T₅₁*	*2.0355*	**Changeabilié**	*Changeability*
6	**6**	**T₅₂**	**3.9663**	**Adaptabilité**	**Adaptability**
5	8	D	0		
4	8	6	0.8792	Ils ne manoeuvre pas à la voile	They do not manoeuvre under sail
4	**7**	**T₅₃**	*0.8792*	**Tactique**	**Tactics**
3	8	D	0		
2	8	40	0.615002	Agit de+surveiller des armes	These+monitor arms
2	**7**	**T₅₄**	**0.615002**	**Probation**	**Probation**
4	*7*	*T₅₃*	*0.8792*	*Tactique*	*Tactics*

2	7	T_{54}	0.615002	*Probation*	*Probation*
2	**6**	**T_{55}**	**1.494202**	**Expérimentation**	**Trialling**
0	6	D	0		
0	5	14	0.93	Etre susceptible+tourne selon les circonstances	May be +running under the circumstances
1	**5**	**T_{56}**	**0.93**	**Au-delà de la volonté**	**Beyond Willpower**
2	6	T_{55}	1.494202	*Expérimentation*	*Trialling*
1	5	T_{56}	0.93	*Au-delà de la volonté*	*Beyond Willpower*
2	**5**	**T_{57}**	**2.424202**	**Qualité**	**Quality**
6	6	T_{52}	3.9663	*Adaptabilité*	*Adaptability*
2	5	T_{57}	2.424202	*Qualité*	*Quality*
3	**5**	**T_{58}**	**6.390502**	**Aptitude**	**Talent**
10	5	T_{49}	200.9441	*Garantie*	*Warranty*
3	5	T_{58}	6.359181	*Aptitude*	*Talent*
3	**4**	**T_{59}**	**207.334502**	**Efficacité**	**Efficacy**
0	4	D	0		
0	3	33	-2.1950	Armés une troupe oisive d'hommes tombe aisément dans la licence	A troop of armed men idle easily falls into the license
1	**3**	**T_{60}**	**-2.1950**	**D'infliger des lésions**	**Infliction of harm**
3	4	T_{59}	207.334502	*Efficacité*	*Efficacy*
1	3	T_{60}	-2.1950	*D'infliger des lésions*	*Infliction of Harm*
2	**3**	**T_{61}**	**205.139502**	**Vigilance**	**Vigilance**

Table A4
Transformation of alpha variables

Var	Rad	Var	Rad	Var	Rad	Var	Rad	Var	Rad
4	5.217	*T9*	*31.3574*	*T21*	*63.3962*	*T33*	*109.9195*	D	
5	3.216	*T12*	*9.1288*	*T24*	*19.0912*	*T36*	*11.5866*	33	7.1596
T1	**8.433**	**T13**	**40.4862**	**T25**	**82.4874**	**T37**	**121.5061**	**T49**	**7.1596**
D	0	D	0	28	4.1003	D	0	*T48*	*24.9615*
6	3.3936	18	4.9088	29	4.1003	39	3.8936	*T49*	*7.1596*
T2	**3.3936**	**T14**	**4.9088**	**T26**	**8.2006**	**T38**	**3.8936**	**T50**	**32.1211**
T1	*8.433*	*T13*	*40.4862*	D	0	*T37*	*121.5061*	*T43*	*135.4085*
T2	*3.3936*	*T14*	*4.9088*	30	4.1003	*T38*	*3.8936*	*T50*	*32.1211*
T3	**11.8266**	**T15**	**45.3950**	**T27**	**4.1003**	**T39**	**125.3997**	**T51**	**167.5296**
7	3.925	19	3.8622	*T26*	*8.2006*	40	4.71	1	14.1255
8	3.925	20	3.5348	*T27*	*4.1003*	41	3.3297	2	14.1255
T4	**7.85**	**T16**	**7.3970**	**T28**	**12.3010**	**T40**	**8.0397**	**T52**	**28.251**
9	3.8936	21	3.5348	*T25*	*82.4874*	*T39*	*125.3997*	*T51*	*167.5296*
10	3.8936	22	3.5348	*T28*	*12.3010*	*T40*	*8.0397*	*T52*	*28.251*
T5	**7.7872**	**T17**	**7.0696**	**T29**	**94.7883**	**T41**	**133.4394**	**T53**	**195.7806**
T4	*7.85*	*T16*	*7.3970*	31	4.7414	42	0.9845		
T5	*7.7872*	*T17*	*7.0696*	32	4.7414	43	0.9845		
T6	**15.6372**	**T18**	**14.4666**	**T30**	**9.4828**	**T42**	**1.9690**		
D	0	D	0	34	2.8242	*T41*	*133.1162*		
11	3.8936	23	3.5348	35	2.8242	*T42*	*1.9690*		
T7	**3.8936**	**T19**	**3.5348**	**T31**	**5.6484**	**T43**	**135.4085**		
T6	*15.6372*	*T18*	*14.4666*	*T30*	*9.4828*	D	0		

T7	3.8936	T19	3.5348	T31	5.6484	3	7.0821		
T8	**19.5308**	**T20**	**18.0012**	**T32**	**15.1312**	**T44**	**7.0821**		
T3	11.8266	T15	45.3950	T29	94.7883	12	5.9211		
T8	19.5308	T20	18.0012	T32	15.1312	13	5.9211		
T9	**31.3574**	**T21**	**63.3962**	**T33**	**109.9195**	**T45**	**11.8422**		
15	3.0429	24	4.7728	36	3.8622	T44	7.0821		
16	3.0429	25	4.7728	37	3.8622	T45	11.8422		
T10	**6.0858**	**T22**	**9.5456**	**T34**	**7.7244**	**T46**	**18.9243**		
D	0	26	4.7728	D	0	D	0		
17	3.0429	27	4.7728	38	3.8622	6	6.0372		
T11	**3.0429**	**T23**	**9.5456**	**T35**	**3.8622**	**T47**	**6.0372**		
T10	6.0858	T22	9.5456	T34	7.7244	T46	18.9243		
T11	3.0429	T23	9.5456	T35	3.8622	T47	6.0372		
T12	**9.1288**	**T24**	**19.0912**	**T36**	**11.5866**	**T48**	**24.9615**		

Table A5

Extraction of termini from the O-mesh

X	Y	A-component Pendulum	O-component Destination	English Extraction	Fusion Value (q)
1	1	$T_1: 4 \rightarrow 5$	T_{O50}	Skilful Movements	8.4330
3	1	$T_2: D \rightarrow 6$	T_{O53}	Tactics	3.3936
3	2	$T_3: T_{A2} \rightarrow T_{A1}$	T_{O11}	Autonomy	11.8266
5	1	$T_4: 7 \rightarrow 8$	T_{O57}	Vigorous Action	7.850
7	1	$T_5: 9 \rightarrow 10$	T_{O7}	Flexible Setting	7.7872
7	2	$T_6: T_{A5} \rightarrow T_{A4}$	T_{O6}	Toughness	15.6372
9	1	$T_7: D \rightarrow 11$	T_{O9}	Advantage	3.8936
9	2	$T_8: T_{A7} \rightarrow T_{A6}$	T_{O8}	Control	19.5308
9	3	$T_9: T_{A8} \rightarrow T_{A3}$	T_{O4}	Affection of Attitude	31.3574
11	1	$T_{10}: 15 \rightarrow 16$	T_{O16}	Variability	6.0858
13	1	$T_{11}: D \rightarrow 17$	T_{O16}	Variability	3.0429
13	2	$T_{12}: T_{A11} \rightarrow T_{A10}$	T_{O10}	Superiority of Means	9.1288
13	3	$T_{13}: T_{A12} \rightarrow T_{A9}$	T_{O10}	Superiority of Means	40.4862
15	1	$T_{14}: D \rightarrow 18$	T_{O15}	Esteem	4.9088
15	3	$T_{15}: T_{A14} \rightarrow T_{A13}$	T_{O18}	Merit	45.3950
17	1	$T_{16}: 19 \rightarrow 20$	T_{O20}	Honesty	7.3969
19	1	$T_{17}: 21 \rightarrow 22$	T_{O22}	Privilege	7.0695
19	2	$T_{18}: T_{A17} \rightarrow T_{A16}$	T_{O16}	Variability	14.4664
21	1	$T_{19}: D \rightarrow 23$	T_{O24}	Acceptance of Authority	3.5348
21	2	$T_{20}: T_{A19} \rightarrow T_{A18}$	T_{O18}	Esteem	18.0012
21	3	$T_{21}: T_{A20} \rightarrow T_{A15}$	T_{O17}	Vigilance	63.3962
23	1	$T_{22}: 24 \rightarrow 25$	T_{O30}	Contrasting	9.5456
25	1	$T_{23}: 26 \rightarrow 27$	T_{O27}	Selectivity	9.5456
25	2	$T_{24}: T_{A23} \rightarrow T_{A22}$	T_{O22}	Privilege	19.0912
25	3	$T_{25}: T_{A24} \rightarrow T_{A21}$	T_{O23}	Mastery	82.4874
29	3	$T_{26}: 28 \rightarrow 29$	T_{O32}	Limitation	8.2006
29	5	$T_{27}: D \rightarrow 30$	T_{O33}	Controlled Subject	4.1003

27	5	T_{28}: $T_{A27} \rightarrow T_{A26}$	T_{O28}	Requirements for Induction	12.3009
27	7	T_{29}: $T_{A28} \rightarrow T_{A25}$	T_{O29}	Charging with Force	94.7883
25	7	T_{30}: $31 \rightarrow 32$	T_{O36}	Attack Prevention	9.4828
23	7	T_{31}: $34 \rightarrow 35$	T_{O37}	Deviation from Normal Rules	5.6484
23	5	T_{32}: $T_{A31} \rightarrow T_{A30}$	T_{O30}	Contrasting	15.1312
23	6	T_{33}: $T_{A32} \rightarrow T_{A29}$	T_{O31}	Management of Resistance	109.9195
21	7	T_{34}: $36 \rightarrow 37$	T_{O40}	Actual Disregard of Noblemen	7.7244
19	7	T_{35}: $D \rightarrow 38$	T_{O41}	Privilege of Citizen	3.8622
19	6	T_{36}: $T_{A35} \rightarrow T_{A34}$	T_{O35}	Obedience	11.5866
19	5	T_{37}: $T_{A36} \rightarrow T_{A33}$	T_{O34}	Dependency	121.5061
17	7	T_{38}: $D \rightarrow 39$	T_{O44}	Liberated	3.8936
17	5	T_{39}: $T_{A38} \rightarrow T_{A37}$	T_{O37}	Deviation from Normal Rules	125.3997
15	7	T_{40}: $40 \rightarrow 41$	T_{O46}	Arms Control	8.0397
15	5	T_{41}: $T_{A40} \rightarrow T_{A39}$	T_{O43}	Mighty Fortress	133.4394
13	7	T_{42}: $42 \rightarrow 43$	T_{O48}	Principal Interest	1.9691
13	5	T_{43}: $T_{A42} \rightarrow T_{A41}$	T_{O41}	Privilege of Citizen	135.4085
11	7	T_{44}: $D \rightarrow 3$	T_{O39}	Dignified in Appearance	7.0821
9	7	T_{45}: $12 \rightarrow 13$	T_{O14}	Tributaries	11.8422
9	6	T_{46}: $T_{A45} \rightarrow T_{A44}$	T_{O44}	Liberated	18.9243
7	7	T_{47}: $D \rightarrow 6$	T_{O53}	Tactics	6.0372
7	6	T_{48}: $T_{A47} \rightarrow T_{A46}$	T_{O46}	Arms Control	24.9615
5	7	T_{49}: $D \rightarrow 33$	T_{O60}	Infliction of Harm	7.1596
5	6	T_{50}: $T_{A49} \rightarrow T_{A48}$	T_{O48}	Principal Interest	32.1211
5	5	T_{51}: $T_{A50} \rightarrow T_{A43}$	T_{O45}	Preclusion	167.5296
1	4	T_{52}: $1 \rightarrow 2$	T_{O3}	Alteration of Position	28.251
2	4	T_{53}: $T_{A52} \rightarrow T_{A51}$	T_{O51}	Changeability	195.7806